

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-003666**Date Inspected:** 16-Aug-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Wu Ming Cai and Zhashi**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG and SAS Tower Fabrication**Summary of Items Observed:**

On this date, Caltrans Office of Structural Material (OSM) Quality Assurance (QA) Inspector Joselito Lizardo was present as requested to perform observations on the fabrication of Orthotropic Box Girder (OBG) and SAS Tower at Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China.

The QA Inspector has randomly observed the following activities on sub-assembly Bays mentioned below;

Bay 2: 114M Tower Mock-ups, Plate Cutting, Rolling

This QA Inspector observed machining/beveling of 2-40mm thick plates marked P541 and one without visible mark(double bevel of 45degree two sides of the plate) for tower double diaphragm web plate seen in progress and 5-30mm thick plates marked FB9A, FB16A and FB9B being set at the table for transition machining on both sides of the plate. Cutting of 60mm thick plates marked P179, P1145, P786, P176, P1232, P175, P181 with various sizes and shapes seen complete. Rolling of 1-90mm thick plate marked P1155 seen in progress and taking out bolts/nuts on one side of splice connection plate to tower splice was noted on tower mock-up 114M.

Bay 3: OBG side/bottom/edge panel

This QA Inspector randomly observed ZPMC welder Liu Zihong ID #062447, utilizing the FCAW Process in the 2G (Horizontal Groove) Position with a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H, semi automatic with ZPMC WPS WPS-B-T-2232-Tc-U4b-F-1, to weld CJP fill passes on groove stiffener end (200mm long) to web plate of edge plate EP176-001 weld joints 049 and 050. The QA Inspector randomly observed ZPMC CWI Wu Ming Cai monitoring preheat and weld parameters.

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Tack welding/fit-up of fillet weld connection of 3-open rib stiffener to various deck panels DP733A, DP513-001 and DP733A using THJ506Fe electrode noted. Preheating with ceramic thermal blanket 6-open rib stiffener to side plate SP402-001-weld joints 009/010 and 003/004 prior welding at gantry #2 also noted.

Bay 4: Tower Diaphragm

This QA observed four ZPMC welders ID #037779, ID #066398, ID #037997, and ID #048617 SMAW(2G) PJP welding fill pass on 60mm stiffener plate to tower double diaphragm(bottom) ESD1-SA318 B/B weld joints 10, 12, 14 and 15. This QA also observed welder Dong Yon Jin ID #066416, Dai Lu ID #048659, Wang Zhong Hua ID #053753, and Meng Tao ID #068918 SMAW(2G) PJP welding fill pass on 40mm web plate to tower double diaphragm(bottom) SSD1-SA333 B/B weld joints 7 and 8. ZPMC welders were noted utilizing Excalibur E9018M H4R, 4.8mm diameter electrode. The QA Inspector randomly observed ZPMC CWI Zhashi monitoring weld parameters.

This QA observed two ZPMC welders, ID #062259, and ID #053609 utilizing the FCAW Process in the 2F (Horizontal) Position with a 1.4mm diameter electrode, filler metal brand K-71TSR, semi automatic with ZPMC WPS WPS-B-T-4132 to weld fillet fill pass on fillet weld connection between tower diaphragm plate to diaphragm flange WSD1-SA318-1. The QA Inspector randomly observed ZPMC CWI Zhao Chen Sun monitoring weld parameters.

Bay 7: OBG - Floor Beam Sub Assembly

FCAW(2G) CJP welding repair on CJP of web plate to flange corner joint of floor beam FB033-001-125 and FB036-001-127 due to UT reject per welding repair report B-WR760 and B-WR764 and following procedure WPS-345-FCAW-2G(2F)-FCM-REPAIR. ZPMC welders Hong Shuili ID #044815 and Chen Chuanzong ID #044824 were seen performing the repairs respectively. Tack/fit-up of stiffeners and flanges to web plate of floor beam FB007-008 and FB087-001 using TL-508 electrode was observed.

The QA Inspector randomly observed ZPMC welder Liu Kaige ID Number 044830 and Zhang Qing Quan ID #044774, utilizing the FCAW Process with a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H in the 3G (Horizontal Groove) Position with ZPMC WPS WPS-B-T-2233-Tc-U4-F, to weld fill pass on skewed connection plate (of 300mm x 300mm diagonal brace) to floor beam bottom flange Sub-Assembly SSD18-PP046-134/135 and SSD10B-PP044-005/006 respectively. The QA Inspector randomly observed ZPMC CWI Huang Wen Pang monitoring preheat and weld parameters.

Bay 8: Tower Diaphragm

The QA Inspector randomly observed ZPMC welder Xiao He Xia ID Number 043573, utilizing the SAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2221-B-L2c-S-2, to weld the cover pass on plate splice butt joint of floor beam sub-assembly FB051-001-001. QA Inspector randomly observed ZPMC CWI Hu Wei Qing monitoring weld parameters.

This QA observed ZPMC welder ID #066443, and ID #066456 SMAW(2G) PJP welding fill pass on 40mm web plate to tower double diaphragm(bottom) SSD1-SA277 B/B weld joints 11 and 12. ZPMC welders were noted utilizing Excalibur E9018M H4R, 4.8mm diameter electrode. The QA Inspector randomly observed ZPMC CWI Lvliqing monitoring weld parameters.

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This QA Inspector randomly observed ZPMC welders ID #067949 and ID #068919 utilizing the FCAW Process in the 3G (Vertical Groove) Position with a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H, semi automatic with ZPMC WPS WPS-B-T-2233-B-U3-F, to weld fill passes on groove (bent heavy plate) splice butt joint on Tower Diaphragm Flange Sub-Assembly WSD1-SA301A/B -weld joint 8B and NSD1-SA196A/B weld joint 3B respectively. The QA Inspector randomly observed ZPMC CWI Lvliqing monitoring preheat and weld parameters.

Summary of Conversations:

No significant conversation occurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Joshua Ishibashi, (858) 232-7081, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo,Joselito	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer
